This listing of claims will replace all prior versions and listings of claims in this application:

b.) Listing of Claims

1. (cancelled)

2. (cancelled)

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (cancelled)

7. (currently amended) An optical system as claimed in claim 9, wherein the ultraviolet ~~Achromatic Fresnel lens for~~ radiation has a wavelength of ~~with a~~ 13 to 14 nanometers ~~wavelength comprising~~ and the objective comprises a zone plate made from molybdenum (Mo), niobium (Nb), Technetium (Tc), or Ruthenium (Ru).

8. (cancelled)

9. (currently amended) ~~A~~ An optical system comprising:
an extreme ultraviolet radiation source;
a spectral filter that filters ultraviolet radiation generated by the source;
a reflective condenser that directs the ultraviolet radiation onto a target;
an aperture for spatially filtering the ultraviolet radiation; ~~and~~
an objective lens that forms an image of the ultraviolet radiation from the target; and
a spatially resolved detector for detecting the image formed by the objective lens.

10. (original) An optical system as claimed in claim 9, wherein the source is a laser-plasma source.

11. (original) An optical system as claimed in claim 9, wherein the source is a gas discharge source.

12. (currently amended) An optical system as claimed in claim 9, wherein the ~~spectrum~~ spectral filter is a multilayer notch filter.

13. (original) An optical system as claimed in claim 9, wherein the condenser is a multilayer coated spherical surface.

14. (currently amended) An optical system as claimed in claim 9, wherein a virtual source of the extreme ultraviolet radiation source formed by the condenser and ~~the~~ a region of interest of the target, which is a mask, reside ~~residing~~ on a Rowland circle determined by the condenser.

15. (original) An optical system as claimed in claim 9, wherein the detector is a CCD camera.

16. (original) An optical system as claimed in claim 9, wherein the detector is a CMOS camera.

17. (original) An optical system as claimed in claim 9, wherein the objective lens comprises an achromatic Fresnel optic with a silicon refractive lens.

18. (original) An optical system as claimed in claim 9, wherein the source uses emission from a copper target.

19. (original) An optical system as claimed in claim 9, wherein the objective lens comprises an achromatic Fresnel optic with a refractive lens made from copper.

20. (new) An optical system as claimed in claim 9, wherein the objective lens comprises a zone plate lens.